In the Specification:

Replace the paragraph beginning at page 6, line 19, with the following rewritten paragraph:

Other existing medical instruments provide general diagnoses for the detection of interfaces between different types of tissues, such as cancerous tissue and healthy tissue, etc. However, such detections have been limited clinically to pre-operative scans, or demand large scanning multi-million-dollar machines, like the MRI CT Mammography. Furthermore, real-time attempts to use these detecting methods are very sensitive to movement of the body, and cannot really be used to position the cutting knife or the biopsy needle. Existing devices provide diagnostic data of limited use since the tissue sampled or removed depends entirely upon the accuracy with which the localization provided by the preoperative CT or MRI Us scan is translated to the intracranial ~~biop-~~ biopsy site. Any movement of the organ or the localization device results in an error in biopsy localization. Also, no information about the tissue being cut by the needle or knife is provided.

Replace the paragraph beginning at page 8, line 1, with the following rewritten paragraph:

According to one broad aspect of the present invention, there is provided a method of examining tissue in order to differentiate it from other tissue according to the dielectric properties of the examined tissue, comprising: applying an electrical pulse to the tissue to be examined via a probe formed with an open cavity such that the probe generates an electrical fringe field in the examined tissue within said cavity and produces a reflected pulse therefrom, with negligible radiation penetrating into other tissues or biological bodies near the examined tissue; detecting the reflected

electrical pulse; and comparing electrical characteristics of the reflected electrical pulse with respect to the applied electrical pulse to provide an indication of the dielectric properties of the examined tissue.

Replace the paragraph beginning at page 14, line 4, with the following rewritten paragraph:

Fig. 1b illustrates a probe 3 of a similar construction, including an outer electrical conductor 3a and an inner electrical conductor 3b insulated from the outer conductor by a dielectric 3c, except that the outer conductor 3a is provided with an outturned flange 3g engaged by the examined tissue 3e. The reflection mechanism in probe 3 illustrated in Fig. 1b will therefore be similar to that described above with respect to probe 2 in Fig. 1a.

Replace the paragraph beginning at page 18, line 18, with the following rewritten paragraph:

In probe 30 illustrated in Fig. 4, the end 31a of the outer conductor 31 defining the open cavity 34 is reduced in diameter to define a tapered section 31b and a relatively small diameter opening 31c for receiving the body of tissue 35 being examined. However, the deformability of tissue 35 permits a significant portion thereof, shown at 35a, to enter the cavity 34, and thus to influence the reflected pulse generated therein.

Replace the paragraph beginning at page 21, line 18, with the following rewritten paragraph:

Fig. 8 illustrates ~~illustrated~~ an arrangement wherein the transmission line 51 is a coaxial cable having an outer conductor connected to the outer conductor of the probe 50, and an inner conductor connected to the inner conductor of the probe. In the arrangement illustrated in Fig. 8, the electrical connections between the flexible coaxial transmission line 51 connected at one end to the pulse source unit 54 and the digitizing unit 55, and at the opposite end to the probe 50, ~~. As shown in Fig. 8, these connections~~ are made by a T-connector 58 having one leg 58a connected to the coaxial line 51, a second leg 58b connected to the pulse source unit 54, and a third leg 58c connected to the digitizing unit 55.

Replace the paragraph beginning at page 22, line 13, with the following rewritten paragraph:

Digitizing unit 55 samples, at a plurality of spaced time intervals, both the incident electrical pulse, namely that applied to the probe ~~51~~ 50, and the reflected pulse reflected by the examined tissue closing the cavity at the end of the probe. Fig. 9a illustrates the sampling process, wherein it will be seen that samples of the voltage levels are taken of the two pulses over a plurality of spaced time intervals. For example, the sampling rate may be 5 GHz, providing 200 picosecond samples. Fig. 9b illustrates a typical data array produced as a result of this sampling operation.